

NEW Biosimilar Antibodies

PD-1 | Nivolumab Biosimilar
PD-L1 | Atezolizumab Biosimilar
CTLA-4 | Ipilimumab Biosimilar
and more

DISCOVER

BioCell



156 (10)

J Immunol 1996; 156:3579-4066; ;
<http://www.jimmunol.org/content/156/10.citation>

This information is current as
of December 2, 2021.

Why *The JI*? [Submit online.](#)

- **Rapid Reviews! 30 days*** from submission to initial decision
- **No Triage!** Every submission reviewed by practicing scientists
- **Fast Publication!** 4 weeks from acceptance to publication

**average*

Subscription Information about subscribing to *The Journal of Immunology* is online at:
<http://jimmunol.org/subscription>

Permissions Submit copyright permission requests at:
<http://www.aai.org/About/Publications/JI/copyright.html>

Email Alerts Receive free email-alerts when new articles cite this article. Sign up at:
<http://jimmunol.org/alerts>

The Journal of Immunology is published twice each month by
The American Association of Immunologists, Inc.,
1451 Rockville Pike, Suite 650, Rockville, MD 20852
All rights reserved.
Print ISSN: 0022-1767 Online ISSN: 1550-6606.



TABLE OF CONTENTS

CUTTING EDGE

- 3579 **Commentary: Novel Vaccine Approaches**
Hildegund C. J. Ertl and Zhiqian Xiang
- 3583 **Commentary: "The Good, the Bad, and the Ugly": The Role of Chemokines in Models of Human Disease**
Robert M. Strieter, Theodore J. Standiford, Gary B. Huffnagle, Lisa M. Colletti, Nicholas W. Lukacs, and Steven L. Kunkel
- 3587 **Shortened Telomeres in Clonally Expanded CD28⁻CD8⁺ T Cells Imply a Replicative History That Is Distinct from Their CD28⁺CD8⁺ Counterparts**
Joanita Monteiro, Franak Battliwalla, Harry Ostrer, and Peter K. Gregersen

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

- 3591 **Different Patterns of TCR Transgene Expression in Single-Positive and Double-Negative T Cells: Evidence for Separate Pathways of T Cell Maturation**
Lirong Cheng, Sussan Dejbakhsh-Jones, Roland Liblau, DeFu Zeng, and Samuel Strober
- 3602 **T Cell Suppression in Transplantation Tolerance Through Linked Recognition**
Joanna D. Davies, Louise Y. W. Leong, Andrew Mellor, Stephen P. Cobbold, and Herman Waldmann
- 3608 **Staphylococcal Enterotoxin D Functions as a Human B Cell Superantigen by Rescuing V_H4-Expressing B Cells from Apoptosis**
Rana Domiati-Saad, Jeanne F. Attrep, Hans-Peter Brezinschek, Anne H. Cherrie, David R. Karp, and Peter E. Lipsky
- 3621 **Cytokine Production by T Lymphocytes from Young and Aged Mice**
Christian R. Engwerda, Barbara S. Fox, and Barry S. Handwerker
- 3631 **Aberrant Regulation of Cytokines in HIV-1 TAT₇₂-Transgenic Mice**
Hildegardo H. Garza, Jr., Om Prakash, and Daniel J. J. Carr

- 3638 Regulation of the Fas Lytic Pathway in Cloned CTL
Alison Glass, Craig M. Walsh, David H. Lynch, and William R. Clark
- 3645 Specificity and Degeneracy of Minor Histocompatibility Antigen-Specific MHC-Restricted CTL
Björn R. Gundlach, Karl-Heinz Wiesmüller, Tobias Junt, Stefan Kienle, Günther Jung, and Peter Walden
- 3652 Intercellular Adhesion Molecule-1 Is Necessary but Not Sufficient to Activate CD4⁺ T Cells: Discovery of a Novel Costimulator on Kidney Tubule Cells
David T. Hagerty
- 3660 Sustained T Cell Receptor-Mediated Ca²⁺ Responses Rely on Dynamic Engagement of Receptors
Brian Behnam Hashemi, James P. Slattery, David Holowka, and Barbara Baird
- 3668 Specific Regulation of VLA-4 and $\alpha_4\beta_7$ Integrin Expression on Human Activated T Lymphocytes
Trinidad Hernández-Caselles, María Martínez-Esparza, Andrew I. Lazarovits, and Pedro Aparicio
- 3678 Concanamycin A, a Powerful Tool for Characterization and Estimation of Contribution of Perforin- and Fas-Based Lytic Pathways in Cell-Mediated Cytotoxicity
Takao Kataoka, Nobukata Shinohara, Hajime Takayama, Kazuaki Takaku, Shunzo Kondo, Shin Yonehara, and Kazuo Nagai
- 3687 DNA Immunization Induces Antibody and Cytotoxic T Cell Responses to Hepatitis B Core Antigen in H-2^b Mice
Andreas Kuhöber, Hans-Peter Pudollek, Kurt Reifenberg, Francis V. Chisari, Hans-Jürgen Schlicht, Jörg Reimann, and Reinhold Schirmbeck
- 3696 CD59 and CD48 Expressed by Rat Retinal Pigment Epithelial Cells Are Major Ligands for the CD2-Mediated Alternative Pathway of T Cell Activation
Janet Liversidge, Rosie Dawson, Sharon Hoey, Dorothy McKay, Peter Grabowski, and John V. Forrester
- 3704 Differential Activity of Dexamethasone on IL-2-, IL-4-, or IL-9-Induced Proliferation of Murine Factor-Dependent T Cell Lines
Jamila Louahed, Jean-Christophe Renauld, Jean-Baptiste Demoulin, Gail Baughman, Suzanne Bourgeois, Kazuo Sugamura, and Jacques Van Snick
- 3711 Expression of IFN Regulatory Factor Family Proteins in Lymphocytes: Induction of Stat-1 and IFN Consensus Sequence Binding Protein Expression by T Cell Activation
Nancy Nelson, Yuka Kanno, Chun Hong, Christina Contursi, Tadashi Fujita, B. J. Fowlkes, Errin O'Connell, Jane Hu-Li, William E. Paul, Dragana Jankovic, Alan F. Sher, John E. Coligan, Angela Thornton, Ettore Appella, Yili Yang, and Keiko Ozato
- 3721 Analysis of the Role of MHC Class II Presentation in the Stimulation of Cytotoxic T Lymphocytes by Antigens Targeted into the Exogenous Antigen-MHC Class I Presentation Pathway
Kenneth L. Rock and Karen Clark

- 3727 A Fundamental Subdivision of Circulating Lymphocytes Defined by Adhesion to Mucosal Addressin Cell Adhesion Molecule-1: Comparison with Vascular Cell Adhesion Molecule-1 and Correlation with β_7 Integrins and Memory Differentiation
Lusijah S. Rott, Michael J. Briskin, David P. Andrew, Ellen L. Berg, and Eugene C. Butcher
- 3737 CD40 Expressed on Thymic Epithelial Cells Provides Costimulation for Proliferation but Not for Apoptosis of Human Thymocytes
Giuseppina Ruggiero, Eva Martinez Cáceres, Arie Voordouw, Eric Noteboom, Daniel Graf, Richard A. Kroczyk, and Hergen Spits
- 3747 TCR $\alpha\beta$ Gene Usage for Myelin Basic Protein Recognition in Healthy Monozygous Twins
Ananth Shanmugam, Christiane Copie-Bergman, Bruno Falissard, Olivier Delrieu, Jean Philippe Jais, Danielle Rebibo, Jean François Bach, and Elisabeth Tournier-Lasserre
- 3755 Peptide-Dependent Expression of HLA-B7 on Antigen Processing-Deficient T2 Cells
Kelly D. Smith and Charles T. Lutz
- 3765 T Cell Tolerance Is Influenced by Concomitant T Cell Recognition of Cross-Reactive Self-Peptides
Robert C. Tam, Eugenia V. Fedoseyeva, Marina Moskalenko, Marvin R. Garovoy, and Gilles Benichou

MOLECULAR AND STRUCTURAL IMMUNOLOGY

- 3772 Generation of a New $\gamma\delta$ T Cell-Specific Monoclonal Antibody (GD3.5): Biochemical Comparisons of GD3.5 Antigen with the Previously Described Workshop Cluster 1 (WC1) Family
Ward M. Jones, Bruce Walcheck, and Mark A. Jutila
- 3780 AP-1 Regulates the Basal and Developmentally Induced Transcription of the CD11c Leukocyte Integrin Gene
Cristina López-Rodríguez, Hanneke C. Kluin-Nelemans, and Angel L. Corbí
- 3788 Early B Cell Factor Interacts with a Subset of κ Promoters
Mikael Sigvardsson, Peter Åkerblad, and Tomas Leanderson
- 3797 The Generation of Antibody Diversity in the Turtle
Alexander Turchin and Ellen Hsu
- 3806 A DNA Binding Protein in Human Thymocytes Recognizes the T Cell Receptor- δ -Deleting Element $\psi J\alpha$
Martie C. M. Verschuren, Cristel J. L. van Bergen, Ellen J. van Gastel-Mol, Ad J. J. C. Bogers, and Jacques J. M. van Dongen
- 3815 T Cell Recognition of MHC Class II-Associated Peptides Is Independent of Peptide Affinity for MHC and Sodium Dodecyl Sulfate Stability of the Peptide/MHC Complex: Effects of Conservative Amino Acid Substitutions at Anchor Position 1 of Influenza Matrix Protein₁₉₋₃₁
Shenhong Wu, Jack Gorski, David D. Eckels, and Debra K. Newton-Nash

HOST DEFENSE

- 3821 Rejection of MHC Class II-Transfected Tumor Cells Requires Induction of Tumor-Encoded B7-1 and/or B7-2 Costimulatory Molecules
Sivasubramanian Baskar, Virginia K. Clements, Laurie H. Glimcher, Nasrin Nabavi, and Suzanne Ostrand-Rosenberg
- 3828 Chemotactic Activity of Mycobacterial Lipoarabinomannans for Human Blood T Lymphocytes In Vitro
Jeffrey S. Berman, Robin L. Blumenthal, Hardy Kornfeld, Jennifer A. Cook, William W. Cruikshank, Mary W. Vermeulen, Delphi Chatterjee, John T. Belisle, and Matthew J. Fenton
- 3836 Oxidative Killing of *Cryptococcus neoformans* by Human Neutrophils: Evidence That Fungal Mannitol Protects by Scavenging Reactive Oxygen Intermediates
Vishnu Chaturvedi, Brian Wong, and Simon L. Newman
- 3841 Role of Host Antigen Receptor-Bearing and Antigen Receptor-Negative Cells in Immune Response to Rat Adenocarcinoma 13762
Alan B. Frey
- 3850 Regulation of Lymphocyte Homing into the Brain During Viral Encephalitis at Various Stages of Infection
David N. Irani and Diane E. Griffin
- 3858 Immunization with Granulocyte-Macrophage Colony-Stimulating Factor-Transduced, but Not B7-1-Transduced, Lymphoma Cells Primes Idiotype-Specific T Cells and Generates Potent Systemic Antitumor Immunity
Hyam I. Levitsky, Jami Montgomery, Mojgan Ahmadzadeh, Kevin Staveley-O'Carroll, Frank Guarnieri, Dan L. Longo, and Larry W. Kwak
- 3866 Mechanisms of *Trypanosoma cruzi*-Induced Down-Regulation of Lymphocyte Function: Inhibition of Transcription and Expression of IL-2 Receptor γ (p64IL-2R) and β (p70IL-2R) Chain Molecules in Activated Normal Human Lymphocytes
Sarmila Majumder and Felipe Kierszenbaum
- 3875 Adoptive Immunotherapy with Tumor-Specific T Lymphocytes Generated from Cytokine Gene-Modified Tumor-Primed Lymph Node Cells
Koichiro Ohno, Hirohisa Yoshizawa, Hiroko Tsukada, Tetsuro Takeda, Yoshifumi Yamaguchi, Kentaro Ichikawa, Yoshie Maruyama, Yoshiyuki Suzuki, Eiichi Suzuki, and Masaaki Arakawa
- 3882 Binding and Presentation of Peptides Derived from Melanoma Antigens MART-1 and Glycoprotein-100 by HLA-A2 Subtypes: Implications for Peptide-Based Immunotherapy
Licia Rivoltini, Douglas J. Loftus, Kathleen Barracchini, Flavio Arienti, Arabella Mazzocchi, William E. Biddison, Michael L. Salgaller, Ettore Appella, Giorgio Parmiani, and Francesco M. Marincola
- 3892 Acceleration of Influenza Virus Clearance by Th1 Cells in the Nasal Site of Mice Immunized Intranasally with Adjuvant-Combined Recombinant Nucleoprotein
Shin-ichi Tamura, Kenji Miyata, Kazutoshi Matsuo, Hideki Asanuma, Hidehiro Takahashi, Katsuhisa Nakajima, Yujiro Suzuki, Chikara Aizawa, and Takeshi Kurata

- 3901 Human Herpes Simplex Virus (HSV)-Specific CD8⁺ CTL Clones Recognize HSV-2-Infected Fibroblasts after Treatment with IFN- γ or When Virion Host Shutoff Functions Are Disabled
Michael A. Tigges, Song Leng, David C. Johnson, and Rae Lyn Burke
- 3911 Enhanced Tumor Outgrowth after Peptide Vaccination: Functional Deletion of Tumor-Specific CTL Induced by Peptide Vaccination Can Lead to the Inability to Reject Tumors
René E. M. Toes, Ria J. J. Blom, Rienk Offringa, W. Martin Kast, and Cornelis J. M. Melief
- 3919 Protective Immunity in BALB/c Mice Against the Simian Virus 40-Induced mKSA Tumor Resulting from Injection of Recombinant Large T Antigen: Requirement of CD8⁺ T Lymphocytes
Jens Zerrahn, Olaf Utermöhlen, Gabriele Warnecke, Wolfgang Deppert, and Fritz Lehmann-Grube

INFLAMMATION

- 3925 Down-Regulation by IL-4 and Up-Regulation by IFN- γ of Mast Cell Induction from Mouse Spleen Cells
Zhi-Qing Hu, Naoko Zenda, and Tadakatsu Shimamura
- 3932 Induction of IL-12 p40 Messenger RNA Expression and IL-12 Production of Macrophages Via CD40-CD40 Ligand Interaction
Takuma Kato, Rie Hakamada, Hidehiro Yamane, and Hideo Nariuchi
- 3939 Galectin-3 Promotes Adhesion of Human Neutrophils to Laminin
Ichiro Kuwabara and Fu-Tong Liu
- 3945 Stem Cell Factor (*c-kit* Ligand) Influences Eosinophil Recruitment and Histamine Levels in Allergic Airway Inflammation
Nicholas W. Lukacs, Robert M. Strieter, Pamela M. Lincoln, Elise Brownell, Drew M. Pullen, Harold J. Schock, Stephen W. Chensue, Dennis D. Taub, and Steven L. Kunkel
- 3952 Activation of Human Monocytes Through CD40 Induces Matrix Metalloproteinases
Najma Malik, Brad W. Greenfield, Alan F. Wahl, and Peter A. Kiener
- 3961 Salicylates Inhibit I κ B- α Phosphorylation, Endothelial-Leukocyte Adhesion Molecule Expression, and Neutrophil Transmigration
Jacqueline W. Pierce, Margaret A. Read, Han Ding, Francis W. Lusciuskas, and Tucker Collins
- 3970 Extracellular ATP Activates Mast Cells Via a Mechanism That Is Different from the Activation Induced by the Cross-Linking of Fc Receptors
Nobuyuki Sudo, Kazuo Tanaka, Yasuhiro Koga, Yuushi Okumura, Chiharu Kubo, and Kikuo Nomoto
- 3980 Eosinophil Degranulation in the Presence of Bronchial Epithelial Cells: Effect of Cytokines and Role of Adhesion
Shigeru Takafuji, Takayuki Ohtoshi, Hajime Takizawa, Kenji Tadokoro, and Koji Ito

- 3986 Neutrophils Undergo Apoptosis Following Ingestion of *Escherichia coli*
R. William G. Watson, H. Paul Redmond, Jiang Huai Wang, Claire Condron,
and David Bouchier-Hayes

CLINICAL IMMUNOLOGY

- 3994 Binding of HIV-1 Virions or gp120-Anti-gp120 Immune Complexes to HIV-1-Infected Quiescent Peripheral Blood Mononuclear Cells Reveals Latent Infection
Laurence Briant, Nolwenn Coudronnière, Véronique Robert-Hebmann,
Moncef Benkirane, and Christian Devaux
- 4005 Phage Display Cloning and Characterization of an Immunogenetic Marker (Perinuclear Anti-Neutrophil Cytoplasmic Antibody) in Ulcerative Colitis
Mark Eggena, Stephan R. Targan, Lukasz Iwanczyk, Alda Vidrich,
Lynn K. Gordon, and Jonathan Braun
- 4012 Intact Antigen Receptor-Mediated Calcium Signals in Patients with Early Stage HIV-1 Infection
Thomas E. Hickey, Patrick J. Blair, Steve Perfetto, Douglas S. Smoot,
Kenneth F. Wagner, Daniel C. St. Louis, Douglas L. Mayers, Jeffrey N. Siegel,
and Carl H. June
- 4018 Human Lupus Anti-Spliceosome A Protein Autoantibodies Bind Contiguous Surface Structures and Segregate into Two Sequential Epitope Binding Patterns
Judith A. James and John B. Harley
- 4027 Endometrial T, B, and NK Cells in Patients with Recurrent Spontaneous Abortion: Altered Profile and Pregnancy Outcome
Marie-Hélène Lachapelle, Pierre Miron, Robert Hemmings,
and Denis Claude Roy
- 4035 Selective Reduction of $V\alpha 14^+$ NK T Cells Associated with Disease Development in Autoimmune-Prone Mice
Marco A. Mieza, Toshihiro Itoh, Jun Q. Cui, Yasuhiko Makino, Tetsu Kawano,
Kennichi Tsuchida, Takao Koike, Toshikazu Shirai, Hideo Yagita,
Akio Matsuzawa, Haruhiko Koseki, and Masaru Taniguchi
- 4041 Murine Lupus in the Absence of $\alpha\beta$ T Cells
Stanford L. Peng, Michael P. Madaio, Dennis P. M. Hughes, I. Nicholas Crispe,
Michael J. Owen, Li Wen, Adrian C. Hayday, and Joe Craft
- 4050 Flow Cytometric and Functional Analyses of Central Nervous System-Infiltrating Cells in SJL/J Mice with Theiler's Virus-Induced Demyelinating Disease: Evidence for a $CD4^+$ T Cell-Mediated Pathology
Jonathan G. Pope, William J. Karpus, Carol VanderLugt, and Stephen D. Miller
- 4059 Immunization with Short Peptides from the Sequence of the Systemic Lupus Erythematosus-Associated 60-kDa Ro Autoantigen Results in Anti-Ro Ribonucleoprotein Autoimmunity
R. Hal Scofield, William E. Henry, Biji T. Kurien, Judith A. James,
and John B. Harley
- 4067 Author Index